

What is claimed is:

1. A method for treating or reducing the advancement, severity or effects of neoplasia comprising the step of administering a therapeutically effective amount of a LT- α/β heteromeric complex and a pharmaceutically acceptable carrier.

2. The method according to claim 1, wherein the LT- α/β heteromeric complex has a LT- $\alpha 1/\beta 2$ stoichiometry.

3. The method according to claim 1, wherein the LT- α/β heteromeric complex is a soluble LT- α/β heteromeric complex.

4. The method according to any one of claims 1-3, wherein the LT- α subunit is selected from the group consisting of lymphotoxin- α , native human or animal lymphotoxin- α , recombinant lymphotoxin- α , soluble lymphotoxin- α , secreted lymphotoxin- α , lymphotoxin- α muteins, or lymphotoxin- α -active fragments of any of the above.

5. The method according to any one of claims 1-3, wherein the LT- β subunit is selected from the group consisting of lymphotoxin- β , native human or animal lymphotoxin- β , recombinant lymphotoxin- β , soluble lymphotoxin- β , secreted lymphotoxin- β , lymphotoxin- β muteins, or lymphotoxin- β -active fragments of any of the above.

6. The method according to claim 3, wherein the LT- β subunit is cleaved between amino acids 44 and 88 and the N-terminal portion replaced with a type I leader sequence.

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7. The method according to claim 6, wherein the type I leader sequence is the vascular cell adhesion molecule 1 (VCAM-1) leader sequence.

5 8. The method according to any one of (claims 1-3,) wherein the (LT- α / β heteromeric complex) is administered in the presence of a therapeutically effective amount of at least one (LT- β -R activating agent).

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10 9. The method according to claim 8, wherein one LT- β -R activating agent comprises a therapeutically effective amount of IFN- γ .

10. The method according to (claim 9), wherein a second (LT- β -R activating agent) comprises a therapeutically effective amount of an anti-LT- β -R antibody.

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15 11. The method according to claim 10, wherein the anti-LT- β -R antibody is a monoclonal antibody.

20 12. The method according to claim 11, wherein the anti-LT- β -R monoclonal antibody is selected from the group consisting of anti-LT- β -R mAb BKA11, CDH10, BCG6 and BHA10.

25 13. A method for treating or reducing the advancement, severity or effects of neoplasia comprising the step of administering a therapeutically effective amount of at least two (LT- β -R activating agents) and a pharmaceutically acceptable carrier.

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14. The method according to claim 13, wherein at least one LT- β -R activating agent comprises an anti-LT- β -R antibody.

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15. The method according to claim 14, wherein the anti-LT- β -R antibody is CBE11.

16. The method according to claim 13, wherein the LT- β -R activating agents comprise at least two anti-LT- β -R monoclonal antibodies which are directed against non-overlapping epitopes of LT- β -R.

17. The method according to claim 16, wherein one anti-LT- β -R monoclonal antibody is selected from the group consisting of AGH1 and BDA8, and another anti-LT- β -R monoclonal antibody is selected from the group consisting of BCG6, BHA10, BKA11, CDH10 and CBE11.

18. The method according to claim 16, wherein one anti-LT- β -R monoclonal antibody is selected from the group consisting of BCG6 and BHA10, and another anti-LT- β -R monoclonal antibody is selected from the group consisting of AGH1, BDA8, BKA11, CDH10 and CBE11.

19. The method according to claim 16, wherein one anti-LT- β -R monoclonal antibody is selected from the group consisting of BKA11 and CDH10, and another anti-LT- β -R monoclonal antibody is selected from the group consisting of AGH1 and BDA8, BCG6, BHA10, and CBE11.

20. The method according to claim 16, wherein one anti-LT- β -R monoclonal antibody is CBE11, and another anti-LT- β -R monoclonal antibody is selected from the group consisting of AGH1, BDA8, BCG6, BHA10, BKA11, CDH10 and CBE11.

21. The method according to claim 16, wherein the anti-LT- β -R monoclonal antibodies are CBE11 and BHA10.

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22. The method according to claim 16, wherein the anti-LT- β -R monoclonal antibodies are CBE11 and CDH10.

23. The method according to claim 16, wherein the anti-LT- β -R monoclonal antibodies are AGH1 and CDH10.

5 24. The method according to any one of claims 13-23, wherein one LT- β -R activating agent is IFN- γ .

10 25. A method for treating or reducing the advancement, severity or effects of neoplasia comprising the step of administering a therapeutically effective amount of cross-linked anti-LT- β -R antibodies as a first LT- β -R activating agent in the presence of a second LT- β -R activating agent and a pharmaceutically acceptable carrier.

15 26. The method according to claim 25, wherein the cross-linked anti-LT- β -R antibodies are non-covalently immobilized on a surface.

27. The method according to claim 25, wherein the cross-linked anti-LT- β -R antibodies are covalently immobilized on a surface.

20 28. The method according to claim 25, wherein the cross-linked anti-LT- β -R antibodies are non-covalently aggregated in solution by means of an anti-LT- β -R antibody cross-linking agent.

25 29. The method according to claim 28, wherein the anti-LT- β -R antibody cross-linking agent comprises a secondary antibody directed against the anti-LT- β -R antibody.

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30. The method according to claim 28, wherein the anti-LT- β -R antibody cross-linking agent comprises an Fc receptor which binds to the anti-LT- β -R antibody.

5 31. The method according to claim 25, wherein the cross-linked anti-LT- β -R antibodies are covalently aggregated in solution by means of a chemical anti-LT- β -R antibody cross-linking agent.

10 32. The method according to any one of claims 25-31, wherein the second LT- β -R activating agent comprises IFN- γ .

15 33. A method for treating or reducing the advancement, severity or effects of neoplasia comprising the step of administering a therapeutically effective amount of at least one LT- β -R activating agent and a pharmaceutically acceptable carrier.

34. The method according to claim 33, wherein at least one LT- β -R activating agent comprises an anti-LT- β -R antibody.

20 35. The method according to claim 34, wherein the anti-LT- β -R antibody is CBE11.

36. A method for selecting a LT- β -R activating agent which acts in the presence of LT- α/β heteromeric complexes comprising the steps of:

25 a) culturing tumor cells in the presence of LT- α/β heteromeric complexes, an effective amount of a first LT- β -R activating agent and a second putative LT- β -R activating agent; and

b) determining whether the second putative LT- β -R activating agent increases the anti-tumor activity

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of the LT- α / β heteromeric complex in the presence of the first LT- β -R activating agent.

37. The method according to claim 36, wherein the first LT- β -R activating agent is IFN- γ .

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A4 5 38. The method according to claim 36, wherein the LT- α / β heteromeric complex has a LT- α 1/ β 2 stoichiometry.

39. A pharmaceutical composition comprising a therapeutically effective amount of a [LT- α / β heteromeric] complex and a pharmaceutically acceptable carrier.

10 40. The pharmaceutical composition according to claim 39, wherein the LT- α / β heteromeric complex has a LT- α 1/ β 2 stoichiometry.

41. The pharmaceutical composition according to claim 39, wherein the LT- α / β heteromeric complex is soluble.

15 42. The pharmaceutical composition according to any one of claims 39-41, further comprising a therapeutically effective amount of [at least one LT- β -R activating agent].

43. The pharmaceutical composition according to claim 42, wherein one LT- β -R activating agent is IFN- γ .

20 44. The pharmaceutical composition according to claim 42, wherein one LT- β -R activating agent is an anti-LT- β -R antibody.

25 45. The pharmaceutical composition according to claim 44, wherein the anti-LT- β -R antibody is a monoclonal antibody.

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46. The pharmaceutical composition according to claim 45, wherein the anti-LT- β -R monoclonal antibody is selected from the group consisting of anti-LT- β -R mAb BKA11, CDH10, BCG6, and BHA10.

5 47. A pharmaceutical composition comprising a therapeutically effective amount of at least two LT- β -R activating agents without exogenous LT- α/β heteromeric complex, and a pharmaceutically acceptable carrier.

10 48. The pharmaceutical composition according to claim 47, wherein at least one LT- β -R activating agent comprises an anti-LT- β -R antibody.

49. The pharmaceutical composition according to claim 48, wherein the anti-LT- β -R antibody is a monoclonal antibody.

15 50. The pharmaceutical composition according to claim 49, wherein the anti-LT- β -R monoclonal antibody is CBE11.

20 51. The pharmaceutical composition according to claim 47, wherein at least two LT- β -R activating agents comprise anti-LT- β -R monoclonal antibodies which are directed against non-overlapping epitopes of LT- β -R.

25 52. The pharmaceutical composition according to claim 51, wherein one anti-LT- β -R monoclonal antibody is selected from the group consisting of AGH1 and BDA8, and another anti-LT- β -R monoclonal antibody is selected from the group consisting of BCG6, BHA10, BKA11, CDH10 and CBE11.

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53. The pharmaceutical composition according to claim 51, wherein one anti-LT- β -R monoclonal antibody is selected from the group consisting of BCG6 and BHA10, and another anti-LT- β -R monoclonal antibody is selected from the group consisting of AGH1, BDA8, BKA11, CDH10 and CBE11.

54. The pharmaceutical composition according to claim 51, wherein one anti-LT- β -R monoclonal antibody is selected from the group consisting of BKA11 and CDH10, and another anti-LT- β -R monoclonal antibody is selected from the group consisting of AGH1 and BDA8, BCG6, BHA10, and CBE11.

55. The pharmaceutical composition according to claim 51, wherein one anti-LT- β -R monoclonal antibody is CBE11, and another anti-LT- β -R monoclonal antibody is selected from the group consisting of AGH1, BDA8, BCG6, BHA10, BKA11, CDH10 and CBE11.

56. The pharmaceutical composition according to claim 51, wherein the anti-LT- β -R monoclonal antibodies are CBE11 and BHA10.

57. The pharmaceutical composition according to claim 51, wherein the anti-LT- β -R monoclonal antibodies are CBE11 and CDH10.

58. The pharmaceutical composition according to claim 51, wherein the anti-LT- β -R monoclonal antibodies are AGH1 and CDH10.

59. The pharmaceutical composition according to any one of claims 51-58, further comprising IFN- γ as one of the LT- β -R activating agents.

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60. A pharmaceutical composition comprising a therapeutically effective amount of cross-linked anti-LT- β -R antibodies as a LT- β -R activating agent and a pharmaceutically acceptable carrier.

5 61. The pharmaceutical composition according to claim 60, wherein the cross-linked anti-LT- β -R antibodies are non-covalently immobilized on a surface.

62. The pharmaceutical composition according to claim 60, wherein the cross-linked anti-LT- β -R antibodies are
10 covalently immobilized on a surface.

63. The pharmaceutical composition according to claim 60, wherein the cross-linked anti-LT- β -R antibodies are non-covalently aggregated in solution by means of an anti-LT- β -R antibody cross-linking agent.

15 64. The pharmaceutical composition according to claim 63, wherein the anti-LT- β -R antibody cross-linking agent comprises a secondary antibody directed against the anti-LT- β -R antibody.

20 65. The pharmaceutical composition according to claim 60, wherein the cross-linked anti-LT- β -R antibodies are covalently aggregated in solution by means of a chemical anti-LT- β -R antibody cross-linking agent.

66. The pharmaceutical composition according to any one of claims 60-65, further comprising IFN- γ as a second
25 LT- β -R activating agent.

67. A pharmaceutical composition comprising a therapeutically effective amount of at least one LT- β -R

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activating agent without exogenous LT- α/β heteromeric complex, and a pharmaceutically acceptable carrier.

68. The pharmaceutical composition according to claim
67, wherein at least one LT- β -R activating agent
5 comprises an anti-LT- β -R antibody.

69. The pharmaceutical composition according to claim
68, wherein the anti-LT- β -R antibody is CBE11.

70. An LT- β -R activating agent selected according to the
method of claim 36.

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